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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/816,579

03/26/2004

Horn-Bond Lin

ARL 04-34

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06/05/2006

U S ARMY RESEARCH LABORATORY

ATTN AMSRL CS CC IP

2800 POWDER MILL RD

ADELPHI, MD 207831197

EXAMINER

DIRAMIO, JACQUELINE A

ART UNIT

PAPER NUMBER

1641

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/816,579	LIN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jacqueline DiRamio	1641	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 November 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of Group I, claims 1 – 23 in the reply filed on November 9, 2005 is acknowledged. The traversal is on the ground(s) that the inventions of Groups I and II operate on the same principles and are therefore not distinct. This is not found persuasive because the operation principle of two devices is not the basis for restriction between independent devices, the distinct structural differences between devices results in their restriction. As set forth on the record in the previous action, the inventions of Groups I and II have different modes of operation, different functions and different effects. Specifically:

Group I is an aerosol-particle analyzer requiring a charger and a gas-tight connection to the charger, which are not required by the analyzer of Group II.

Group II is an aerosol-particle analyzer requiring a gas and particle inlet through which the gas and any particles enter, which is not required by the analyzer of Group I.

Therefore, the delineated inventions of Groups I and II are in fact patentably distinct and independent from each other and would required undue burdensome and examination.

The requirement is still deemed proper and is therefore made FINAL.

Claim 24 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention.

***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

On pages 13-17 of the specification, "analyte 80" is disclosed with respect to Figure 1, however, this reference number is not found in Figure 1.

On page 14, line 11 of the specification, "shield electrode 490" is disclosed with respect to Figure 1, however, this reference number is not found in Figure 1.

On page 17, line 9 of the specification, "shield electrode 442" is disclosed with respect to Figure 1, however, this reference number is not found in Figure 1.

On page 20, line 17 of the specification, "structure-switching signaling aptamer 820" is disclosed with respect to Figure 3, however, this reference number is not found in Figure 3.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

In Figures 1 and 2, reference number "480" is displayed, however, this reference number is not disclosed in the specification.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informalities:

On page 17, line 2, "particle counter 190" is disclosed, however this counter was previously labeled as "290" and is shown as "290" in Figure 1 (see p14, line 1).

On page 20, line 20, "Stem-2" is labeled as "822," however, "Stem-2" was previously labeled as "824" as is shown as "824" in Figure 3 (see p20, line 19).

On page 23, line 20, "analysis liquid" is labeled as "460," however, the "analysis liquid" was previously labeled as "450" and is shown as "450" in Figures 1 and 2.

Appropriate correction is required.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 – 8, 10, 13, and 15 – 23 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 – 9, 17 and 22 – 31 of copending U.S. Application No. 10/708,191.

The copending application teaches an aerosol-particle analyzer (APA) for measuring an analyte in particles in gas comprising:

(a) an analysis liquid chosen such that when the analysis liquid is mixed with the particles, an optical property of the analysis liquid varies according to the amount of the analyte in the particles;

(b) a charged droplet generator, i.e. analysis-liquid-handling subsystem (ALHS) that holds the analysis liquid and generates a charged droplet of the analysis liquid (CDAL), i.e. CVALH, and ejects it out of a charged-droplet generator output when signaled to do so;

(c) a charger that imparts an electrical charge to any particles accepted through the gas input;

(d) a particle-droplet collision subsystem (PDCS), consisting of a gas tight container, having a charged-droplet input (gas tight connection) connected to the charged-droplet generator (ALHS), which accepts the CDAL (CVALH), a charged particle input connected via a gas-tight connection to the charger, through which gas and charged particles enter the gas-tight container, and a vacuum connection;

(e) a vacuum pump connected to the gas-tight container that draws gas and particles into the gas-tight container;

(f) a droplet analysis subsystem, which comprises a means to measure changes in the optical property of the CDAL (CVALH), so that the amount of analyte in the CDAL, and in the particles that combined with the CDAL, can be determined from these measurements of the optical property; and

(g) a receptacle (collection vessel) to collect and store the droplet ejected after the optical property of the CDAL (CVALH) has been measured.

With respect to the limitations found in the instant application's claims 2 – 8, 10, 13, and 15 – 12, the copending application's claims 1 – 9, 17 and 22 – 31 anticipate these recited claims and limitations.

**Conclusion**

No claims are allowed.

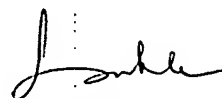
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacqueline DiRamio whose telephone number is 571-272-8785. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jackie DiRamio  
Patent Examiner  
Art Unit 1641



LONG V. LE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600

05/25/06